ABDIMAS POLSAKA
JURNAL PENGABDIAN KEPADA MASYARAKAT
ISSN (Online) : 2829-162X
OPEN ACCESS
Publisher : LPPM Politeknik Sandi Karsa, Sulawesi Selatan, Indonesia
DOI: 10.35816/abdimaspolsaka
DOI: https://doi.org/10.35816/abdimaspolsaka.v4i2.100

Assistance for pregnant women at risk in efforts to prevent pregnancy complications

Yoga Tri Wijayanti[a*], Warlinda[b], Hartaty[c], Ririn Indriani[d], Fatimah[e]
[a] Poltekkes Kemenkes Tanjungkarang, Lampung Indonesia
[b] Universitas Kurnia Jaya Persada, South Sulawesi, Indonesia
[c] Politeknik Sandi Karsa, South Sulawesi, Indonesia
[d] Poltekkes Kemenkes Malang, East Java, Indonesia
[e] Sekolah Tinggi Ilmu Kesehatan Papua, Indonesia

*Corresponding Author
Yoga Tri Wijayanti, Poltekkes Kemenkes Tanjungkarang, Lampung Indonesia. Email: yogatriwijayanti@poltekkes-tjk.ac.id

Received: 05 July 2025 | Revised: 05 August 2025 | Accepted: 01 September 2025 | Published: 10 September 2025

ABSTRACT
High-risk pregnancy is a condition that can increase maternal and fetal morbidity and mortality, so it requires special attention and treatment. This community service aims to assist pregnant women who are classified as high risk to prevent complications during pregnancy and childbirth. Implementing the activity includes health counseling, routine health check-ups, nutritional counseling, and early detection training on pregnancy danger signs. The service team involves medical personnel, midwives, and nursing students as facilitators and field assistants. The results showed an increase in participants' knowledge of pregnancy hazards (from 42% to 87%), an increase in adherence to regular antenatal visits (from 60% to 95%), and a change in healthy living behaviors in most participants. In addition, this program has succeeded in strengthening the relationship between the community and health workers and strengthening the family's role in supporting healthy pregnancies. In conclusion, this mentoring activity is effective in increasing awareness, knowledge, and readiness of pregnant women at risk in dealing with pregnancy and childbirth. Sustainability of the program and support from relevant parties are needed to reach more targets and strengthen the referral system for high-risk pregnant women at the primary level.

Keywords: Community service, High-risk pregnancy, Maternal health, Pregnancy complications, Pregnant women's assistance.

INTRODUCTION

Maternal health is a critical component of public health that directly influences the well-being of both mothers and their offspring. Safe and healthy pregnancies ensure women's survival and contribute to future generations' physical and cognitive development [1]. However, despite advances in medical science and public health efforts, pregnancy-related complications remain a primary global concern, especially among women categorised as high-risk. A high-risk pregnancy refers to a condition in which the health of the mother, the fetus, or both is at greater risk than in a typical pregnancy [2]. These risks can stem from maternal age (under 20 or over 35), pre-existing medical conditions such as hypertension or diabetes, multiple pregnancies, malnutrition, or a history of pregnancy complications. Globally, the World Health Organisation (WHO) estimates that approximately 295,000 women die every year due to complications related to pregnancy and childbirth [3]. Most of these deaths are preventable and occur in low- and middle-income countries, where access to quality maternal healthcare is limited. In this context, pregnancy complications such as preeclampsia, gestational diabetes, preterm labour, and postpartum haemorrhage present severe threats. These conditions often arise unexpectedly and require timely identification and management to prevent fatal outcomes [4].

One of the primary challenges in addressing high-risk pregnancies is the lack of awareness among pregnant women and their families about danger signs and the importance of early detection [5]. Additionally, socio-cultural beliefs, low education levels, economic constraints, and geographic barriers often prevent women from seeking timely medical care [6]. These challenges highlight the importance of targeted assistance programs for pregnant women beyond clinical interventions, including education, counselling, and continuous monitoring throughout the pregnancy [7]. Community service initiatives play an essential role in filling these gaps. Community-based interventions that involve local healthcare providers, midwives, community health workers, and volunteers have shown positive outcomes in promoting maternal health [8]. These services include health education sessions, home visits, nutritional support, antenatal check-up facilitation, and emotional support. By fostering trust between healthcare providers and the community, such initiatives empower women to take control of their reproductive health and encourage family involvement in ensuring safe pregnancies [9].

In addition, maternal health efforts through community engagement enhance early identification of high-risk pregnancies, promote adherence to antenatal care schedules, and improve overall pregnancy outcomes [10]. Educating pregnant women about proper nutrition, the importance of regular antenatal visits, and danger signs such as bleeding, severe headaches, and reduced fetal movement can significantly reduce the risk of complications [11]. Moreover, involving male partners and family members in maternal health awareness strengthens the support system around pregnant women, which is critical in emergencies [12]. In our community service program, we focus on proactive pregnant women as a strategy to reduce the incidence of pregnancy complications among high-risk groups. The initiative includes structured health education, personalised counselling, and establishing a community-based monitoring system [13]. We aim to build a sustainable maternal care model rooted in community participation by collaborating with local health centers, midwives, and nursing students.

This program not only addresses the medical aspects of pregnancy but also the socio-emotional needs of women during this vulnerable phase. Empowering women through knowledge and support creates a ripple effect that enhances community health awareness. Furthermore, early interventions guided by community service principles reduce the burden on referral hospitals and contribute to a more efficient health system. Ensuring maternal health in high-risk pregnancies requires an integrated approach that combines medical expertise with grassroots-level community engagement. Through focused community service efforts, education, and continuous support, we can identify early risks, manage complications effectively, and create a safe environment for mothers and babies. This introduction sets the foundation for the implementation and evaluation of a community-based program aimed at supporting pregnant women at risk and preventing pregnancy-related complications.

METHOD

This community service program adopted a participatory and empowerment-based approach to improve maternal health outcomes among high-risk pregnant women. The program was implemented over three months in collaboration with a local public health centre, village midwives, community health cadres, and nursing students. The methods applied were designed to promote sustainable behavioural changes, enhance knowledge, and facilitate access to maternal health services. The program targeted 30 pregnant women identified as high-risk based on antenatal screening by midwives. High-risk criteria included: Maternal age <20 or >35 years. History of chronic diseases (e.g., hypertension, diabetes). Previous pregnancy complications (e.g., preeclampsia, miscarriage). Multiple pregnancies. Low body mass index or anaemia. Participants were selected through purposive sampling in coordination with local health workers.

The intervention was structured into four core activities: Health Education Sessions. Educational sessions were conducted weekly in small groups, covering topics such as: Early detection of pregnancy danger signs. Nutrition for pregnant women. Personal hygiene and infection prevention. Mental health and stress management. Each session used interactive methods (flip charts, audiovisual aids, role-playing) to accommodate varying literacy levels. Individual Counselling and Monitoring. Midwives and student facilitators provided one-on-one counselling during home visits and clinic appointments. Topics focused on personalised risk factors, lifestyle adjustments, emotional support, and birth preparedness. Participants received maternal health monitoring cards to track vital signs, weight, fetal movements, and antenatal visit records. Community Empowerment through Health Cadres. Local community health cadres were trained to assist in monitoring pregnant women, reminding them of ANC appointments, providing peer support, and referring emergencies. This grassroots involvement strengthened the local health network and ensured continuity of care beyond the program duration.

Family Engagement Workshops. Family members (especially spouses and mothers-in-law) were invited to workshops discussing the importance of family support during pregnancy to reinforce the support system. Sessions emphasised shared responsibilities, emergency preparedness, and respectful maternal care. Pre- and post-intervention evaluations were conducted using questionnaires assessing: Knowledge of pregnancy danger signs. Attitudes toward maternal health. Antenatal care compliance. Behavioural changes related to diet, hygiene, and rest. In addition, qualitative feedback

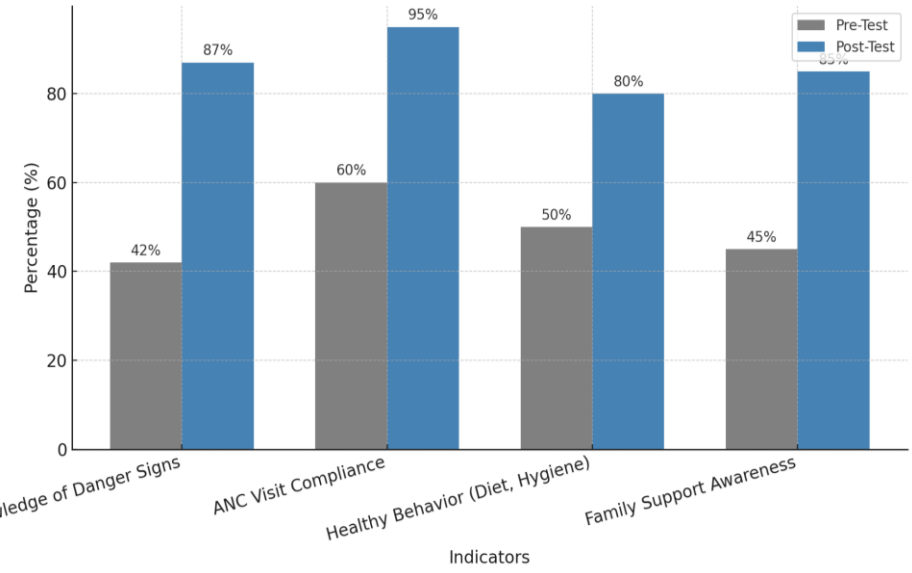
was gathered through interviews and group discussions to capture participant experiences and identify areas for program improvement.

Ethical Considerations

All participants were informed about the program's purpose, activities, and voluntary nature. Verbal consent was obtained before participation. Confidentiality was maintained throughout data collection and reporting.

Figure 1. Method of implementation

RESULT



Graph 2. Pre-test and post-test results for community service activities

The bar chart above presents a comparative analysis of four key indicators assessed before and after the community service intervention. The improvements demonstrate the

program's positive impact on participants' knowledge, behaviour, and engagement with maternal health services.

Knowledge of Danger Signs. Health education sessions were practical in raising awareness about early warning signs such as bleeding, high fever, and swelling, enabling quicker response and referrals. ANC Visit Compliance. Counselling and home visit reminders encouraged better follow-up, dramatically improving health-seeking behaviour and healthy behaviour (Diet and hygiene). Nutrition counselling and daily habit coaching contributed to positive behaviour change in maintaining a healthier pregnancy. Family Support Awareness. Family workshops enhanced the awareness and involvement of spouses and other family members in supporting pregnant women.

These findings suggest that community-based assistance programs, when implemented in a participatory and culturally appropriate manner, can significantly enhance high-risk pregnant women's health literacy, preparedness, and self-efficacy. The active involvement of health cadres, midwives, and families is crucial in sustaining maternal health improvements and preventing pregnancy complications. However, continued evaluation is necessary to assess long-term outcomes and determine the sustainability of behavioural changes post-intervention. Future steps should include follow-up visits, strengthening referral systems, and integrating this model into local maternal health programs for broader impact.

DISCUSSION

Maternal mortality and morbidity remain persistent global health challenges, particularly in low- and middle-income countries. High-risk pregnancies, if not correctly managed, significantly contribute to this burden. The community service program described in this study sought to address this issue by providing targeted assistance to pregnant women categorised as high-risk. The discussion below explores the interventions' relevance, effectiveness, and implications, as well as the limitations and opportunities for scaling up similar efforts.

Impact on Knowledge of Pregnancy Danger Signs. The significant improvement in participants' awareness of pregnancy danger signs (from 42% to 87%) illustrates the effectiveness of health education when delivered through culturally appropriate and interactive methods. Previous studies have shown that a lack of knowledge is one of the key barriers to timely care-seeking behaviour among pregnant women. Using participatory teaching tools such as flip charts, role-playing, and audiovisuals enhanced retention and understanding, especially among women with low educational backgrounds. This aligns with WHO recommendations for integrating community-based maternal health education into antenatal care programs [14]. By equipping women with the ability to recognise early warning signs such as vaginal bleeding, severe headaches, blurred vision, and reduced fetal movement, the intervention fostered a proactive attitude toward seeking care, which is critical in preventing pregnancy complications [15].

Improvement in Antenatal Care (ANC) Visit Compliance. The increase in ANC compliance from 60% to 95% is a noteworthy outcome. ANC attendance is strongly correlated with better pregnancy outcomes, allowing early detection of risk factors and appropriate medical interventions. In this program, consistent follow-ups, personalised counselling, and appointment reminders by community health workers played a vital role in increasing attendance. Moreover, the emphasis on home visits and the involvement of trained nursing students created a supportive environment where women felt cared for and less intimidated by formal health settings. This approach is supported by the

"continuum of care" model, which emphasises the importance of linking home, community, and facility-based services [16].

Changes in Healthy Behaviour and Lifestyle. Behavioural changes related to diet, hygiene, and rest showed marked improvement (from 50% to 80%). These changes were facilitated through repeated counselling, visual demonstrations, and goal-setting during home visits. Proper nutrition and hygiene during pregnancy reduce the risk of infections, anaemia, and fetal growth restrictions, which are common complications among high-risk pregnancies [17]. This finding indicates that behaviour change communication strategies, when personalised and consistently reinforced, can lead to meaningful improvements in maternal practices. However, sustained behaviour change may require longer-term engagement and support from family members, which leads to the following key discussion point [18].

Strengthening Family Support and Engagement. Family involvement increased from 45% to 85% regarding awareness and supportive behaviour, especially from husbands and older women. Culturally, many decisions related to health-seeking during pregnancy are influenced by family members. The program's family workshops proved to be an effective medium for fostering shared responsibility and respectful maternity care. This improvement supports the notion that maternal health should not be seen solely as a woman's issue, but as a collective family and community responsibility. Educating family members, especially male partners, has improved emotional support, birth preparedness, and emergency financial planning [19].

Role of Community Health Cadres. Empowering local health cadres to support pregnant women added a sustainability dimension to the intervention [20]. Cadres served as both information disseminators and social support agents. Their proximity to the community allowed them to provide real-time updates to midwives and ensure that no woman was left unmonitored. This model resonates with global best practices, encouraging community health workers to bridge the gap between formal health systems and underserved populations. The cadre system also contributes to resilience in maternal health services, especially in rural areas with limited professional healthcare access. It builds a culture of community ownership in healthcare delivery, essential for long-term impact [21].

Holistic and Human-Centred Approach. A strength of this community service initiative was its holistic design, combining health education, counselling, monitoring, emotional support, and family engagement. This person-centred approach addressed both medical and emotional and social dimensions of pregnancy. Women reported feeling more confident, less anxious, and more prepared for childbirth [22]. Studies on respectful maternity care emphasise the importance of communication, empathy, and dignity in health services. Emotional support as a formal intervention component made the participants feel valued and heard, qualities often lacking in overburdened health systems [23].

Despite the positive results, several challenges were noted. Some participants faced logistical barriers such as a lack of transportation or domestic responsibilities that hindered their ability to attend group sessions. Additionally, the three-month duration of the intervention may be insufficient to assess long-term behaviour change or outcomes such as birth complications or neonatal health. Another limitation was the reliance on self-reported data, which could be subject to recall or social desirability bias. While facilitators attempted to triangulate responses through home observations and health card reviews, future studies would benefit from more objective health indicators and follow-

up assessments postpartum. The sample size, although adequate for a pilot program, limits the generalizability of the findings. Scaling up would require adapting the model to different cultural, geographical, and resource settings.

The findings from this community service initiative offer valuable insights for policymakers and health practitioners. Firstly, integrating community engagement into formal maternal health services can substantially improve outcomes in high-risk pregnancies. Secondly, task-shifting some responsibilities (e.g., education, follow-up reminders) to trained community members can alleviate the burden on healthcare providers while increasing accessibility. This model also underscores the potential of university–community partnerships in strengthening public health. Involving students supports service delivery and contributes to experiential learning and capacity building for future health professionals.

CONCLUSIONS

This community service initiative successfully addressed the core objective of providing targeted assistance to high-risk pregnant women to prevent pregnancy complications. The program significantly improved maternal knowledge, behavior, and access to antenatal care through a comprehensive approach involving health education, individual counselling, home visits, community empowerment, and family engagement. The increase in participants' awareness of pregnancy danger signs, compliance with ANC visits, adoption of healthy behaviours, and strengthened family involvement highlights the effectiveness of community-based interventions in enhancing maternal health outcomes. These results suggest that proactive and culturally sensitive engagement at the community level can play a critical role in reducing risks during pregnancy, especially among vulnerable populations. Moreover, integrating local health cadres and collaborating with health centres ensured continuity of care and strengthened the maternal health support network. The program empowered the pregnant women, their families, and the broader community to take collective responsibility for safe motherhood. In conclusion, the findings affirm that structured community support and education are essential in managing high-risk pregnancies. This model demonstrates a viable and replicable strategy for improving maternal health at the grassroots level, with the potential to be expanded and institutionalised as part of regional and national maternal health programs.

References

[1] S. Z. Putri, S. M. Bachtiar, and S. Suprapto, “A Descriptive Case Series on Combined Education, Breast Care, and Oxytocin Massage for Lactation Support in Indonesia,” *J. Public Heal. Sci.*, vol. 4, no. 02, pp. 165–179, 2025, doi: https://doi.org/10.56741/IISTR.jphs.001030.

[2] N. S. Latif, A. Yusuf, and M. K. S, “Analysis of the causes of diabetes mellitus occurrence in the chronic disease management program,” *J. Ilm. Kesehat. Sandi Husada*, vol. 14, no. 1, pp. 97–105, Jun. 2025, doi: https://doi.org/10.35816/jiskh.v14i1.1251.

[3] B. Jenkinson *et al.*, “Beyond bereavement: Women’s healthcare experiences and cardiovascular disease risk in the years after stillbirth and recurrent early pregnancy loss,” *Women and Birth*, vol. 38, no. 3, p. 101915, May 2025, doi: https://doi.org/10.1016/j.wombi.2025.101915.

[4] S. Segura-Pérez *et al.*, “Community-Engaged Codesign and Piloting of the FOOD4MOMS Produce Prescription Program for Pregnant Latina Women,” *Curr. Dev. Nutr.*, vol. 9, no. 3, p. 104572, Mar. 2025, doi: https://doi.org/10.1016/j.cdnut.2025.104572.

[5] M. Abdulsalam, M. Tessema, M. Mohsin, T. Malik, and F. I. Abdulsalam, “Determining factors associated with anaemia in pregnant women visiting the antenatal care unit at St.

Paul's Hospital, Addis Ababa, Ethiopia: Unmatched case-control study," *Women Child. Nurs.*, vol. 3, no. 1, pp. 27–34, Mar. 2025, doi: https://doi.org/10.1016/j.wcn.2025.02.001.
[6] F. Fitriani and F. Anita, "Impact of husband support on maternal psychological well-being during pregnancy: a systematic review," *J. Edukasi Ilm. Kesehat.*, vol. 3, no. 2, pp. 55–62, Jul. 2025, doi: https://doi.org/10.61099/junedik.v3i2.112.
[7] G. Gustini and A. Akib, "Increasing Pregnant Women's Knowledge of Pregnancy Care through Community Based Health Education," *J. Pengabdi. Masy. Edukasi Indones.*, vol. 2, no. 2, pp. 86–92, May 2025, doi: https://doi.org/10.61099/jpmei.v2i2.97.
[8] H. S. Ahmed, A. Teli, K. Khullar, and B. L. Deepak, "Maternal health and obstetric complications of genetic neuromuscular disorders in pregnancy: A systematic review," *Eur. J. Obstet. Gynecol. Reprod. Biol.*, vol. 304, pp. 152–170, Jan. 2025, doi: https://doi.org/10.1016/j.ejogrb.2024.11.046.
[9] S. Figueiredo and A. Tereso, "Needs of women that experience pregnancy with an ostomy: A scoping review," *Midwifery*, vol. 143, p. 104322, Apr. 2025, doi: https://doi.org/10.1016/j.midw.2025.104322.
[10] M. C. Lichtsztejn, A. Molas, and J. Pujol-Tarrés, "Risk and decision-making: Communication between health professionals and pregnant women at risk of preeclampsia in Catalonia," *Soc. Sci. Med.*, vol. 367, p. 117786, Feb. 2025, doi: https://doi.org/10.1016/j.socscimed.2025.117786.
[11] L. Ajeng Wijayanti and D. Nurhanifah, "The Effectiveness of Pregnant Women's Class on the Success of Exclusive Breastfeeding," *J. Interdiscip. Heal.*, vol. 1, no. 1, pp. 19–26, May 2025, doi: https://doi.org/10.61099/jih.v1i1.103.
[12] N. Timsin and S. Wangpitipanit, "The effects of a health literacy promotion program for prevention of preterm birth among pregnant women who received antenatal care services in the hospital-based," *Women Child. Nurs.*, vol. 3, no. 1, pp. 20–26, Mar. 2025, doi: https://doi.org/10.1016/j.wcn.2025.01.003.
[13] Y. T. Wijayanti, D. Nurhanifah, A. S. Asmi, S. Suprapto, R. Rahagia, and R. Millati, "Perception of Nursing Students on Clinical Teaching and Learning of Public Health Nurses: A Descriptive Qualitative Approach," *Malaysian J. Nurs.*, vol. 16, no. 04, pp. 142–151, 2025, doi: https://doi.org/10.31674/mjn.2025.v16i04.014.
[14] K. Atkin, G. Christopulos, R. Turk, J. M. Bernhardt, and K. Simmonds, "Educating Pregnant Women About the Dangers of Extreme Heat and Air Pollution," *J. Obstet. Gynecol. Neonatal Nurs.*, vol. 53, no. 4, pp. 438–446, Jul. 2024, doi: https://doi.org/10.1016/j.jogn.2024.01.005.
[15] H. Maryam *et al.*, "'If it has happened once, it can happen again'. The impact of previous pregnancy loss on anxious women's ongoing pregnancies: A qualitative study from Pakistan," *Midwifery*, vol. 137, p. 104087, Oct. 2024, doi: https://doi.org/10.1016/j.midw.2024.104087.
[16] L. Van der Meer, H. E. Ernst-Smelt, M. P. Lambregtse-van den Berg, M. van 't Hof, A. M. Weggelaar-Jansen, and H. H. Bijma, "Exploring perceptions of vulnerability among women facing psychosocial adversity before, during and after pregnancy: A qualitative interview-study using thematic analysis," *Sex. Reprod. Healthc.*, vol. 41, p. 100999, Sep. 2024, doi: https://doi.org/10.1016/j.srhc.2024.100999.
[17] E. Banafshe, N. Javadifar, Z. Abbaspoor, M. Karandish, and S. Ghanbari, "Factors Influencing Weight Management in Pregnant Women with Overweight or Obesity: A Meta-Synthesis of Qualitative Studies," *J. Acad. Nutr. Diet.*, vol. 124, no. 8, pp. 964-994.e1, Aug. 2024, doi: https://doi.org/10.1016/j.jand.2024.04.011.
[18] S. Wahyuni *et al.*, "Free ultrasound examination (ultrasound) with the theme "optimize pregnancy examination to guard a healthy pregnancy."," *J. Pengabdi. Masy. Edukasi Indones.*, vol. 1, no. 2 SE-Articles, pp. 70–76, Jun. 2024, doi: https://doi.org/10.61099/jpmei.v1i2.52.
[19] J. W. E. Quek *et al.*, "Global epidemiology, natural history, maternal-to-child transmission, and treatment with DAA of pregnant women with HCV: a systematic review and meta-

analysis," *eClinicalMedicine*, vol. 74, p. 102727, Aug. 2024, doi: https://doi.org/10.1016/j.eclinm.2024.102727.
[20] I. Abu Aleinein and E. Salem Sokhn, "Knowledge and prevalence of urinary tract infection among pregnant women in Lebanon," *Heliyon*, vol. 10, no. 17, p. e37277, Sep. 2024, doi: https://doi.org/10.1016/j.heliyon.2024.e37277.
[21] N. K. Ayala *et al.*, "Protocol for a randomized controlled trial comparing phone-based prenatal mindfulness training to usual care for pregnant people at risk for hypertensive disorders of pregnancy," *Contemp. Clin. Trials*, vol. 145, p. 107661, Oct. 2024, doi: https://doi.org/10.1016/j.cct.2024.107661.
[22] S. Suprapto, T. Mulat, I. Ismail, and E. Kongkoli, "Determinants of Nurse Capacity Development in Health Services," *J. Ilm. Kesehat. Sandi Husada*, vol. 10, no. 2 SE-Articles, Dec. 2021, doi: https://doi.org/10.35816/jiskh.v10i2.628.
[23] U. Marbun and Irnawati Irnawati, "Edukasi Bahaya dan Pencegahan Preeklampsia Pada Kehamilan," *Abdimas Polsaka*, pp. 64–69, Mar. 2023, doi: https://doi.org/10.35816/abdimaspolsaka.v2i1.36.